

Date: Monday, 10/29/2007 9:01:22 AM  
 User: Kim Johnston

## Process Sheet

44

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : ARMOR SHIELD  
 Job Number : 35410  
 Estimate Number : 13054  
 P.O. Number : *N/A*  
 This Issue : 10/29/2007 S.O. No. : *N/A*  
 Prsht Rev. : NC  
 First Issue : 10/29/2007 Type : LANDING GEAR  
 Previous Run :  
 Written By : *07.10.29*  
 Checked & Approved By : *07.10.29*  
 Comment : Est Rev: A New Issue 07.10.25 EC verified by DD

Part Number : D350748201A  
 Drawing Number : DSI9326 *UNDER REVIEW* *DSI 9326 B.*  
 Project Number : N/A  
 Drawing Revision : U/R  
 Material : *N/A*  
 Due Date : 10/31/2007 Qty: 1 Um: Each

Additional Product

**DART**

TEL: 1-613-632-3336  
 FAX: 1-613-632-4443

TRANSPORT CANADA APPROVAL 0-09-29

P/N	D350-748-201	CHG	CHG001
DESC	Crosstube Aft High	STC	SH06-27
LOT	B31909	STC	SR02359NY
MODEL	AS350/355	STC	

MADE IN CANADA

Job Number:



Seq. #: Machine Or Operation: Description:

1.0 DC DOCUMENT CONTROL



Comment: Photocopy bluefile & type labels per PPP D350-748-201A CHG002 001 *07.10.29*  
 Add DSI 9326 to existing paper work.

2.0 D350748-201 CROSSTUBE HIGH FWD



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Aft Fwd Crosstube

Batch: *31909* ml 07 10 29 (1)

POSITIVE RECALL

3.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Remove tube from packaging

2-Apply Armor sheild as per DSI 9326

A/R Armor Sheild Batch: *m106053* ml 07 10 29 (1)

4.0 QC14 INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

*748-300* (1)

POSITIVE RECALL

5.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-748-201A

Location:

PPP Rev: *07/10/30* (1)

POSITIVE RECALL

EFFECTIVE *07.10.30* AUTH *07.10.30*RELEASED *07.10.30* DATE *07.10.30*

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
07.10.20	2.0						

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07.10.20	2.0	MASKING WEAVER. DO NOT CONFORMING TO DSI 9326 REV.B		ACCEPTABLE DEVIATION	07.10.20	07.10.30		

NOTE: Date & initial all entries

Date: Monday, 10/29/2007 9:01:23 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: ARMOR SHIELD

Job Number: 35410

Part Number: D350748201A

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



6.0 35410-30

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN <i>PH</i>	DRAWN BY <i>PH</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>J. J.</i>	APPROVED <i>A</i>	DRAWING NO. DSI 9326	REV. A SHEET 1 OF 1
DATE 06.02.14		TITLE ARMOR SHIELD	SCALE NTS
A	06.02.14	NEW ISSUE	

## DART SERVICE INSTRUCTION

To further protect Dart crosstubes from mechanical damage in service, they may be treated with "Armor Shield" surface treatment.

INSTALLATION	CANADIAN STC	FAA STC
D205-596-101/-103/-105/-107	SH03-6	SR01742NY
D212-664-101/-201	SH01-9	SR01298NY
D412-664-203		
D206-667-101/-103/-201/-203	SH01-5	SR01304NY
D407-667-105/-205		
D058-676-101/-201	N/A	SR01018SE

To designate crosstubes with 'Armor Shield' add 'A' to the Part Number. For example, D206-667-101A is a D206-667-101 crosstube coated with Armor Shield. It is acceptable to apply the Armor Shield in regions shown in Figure 1 only. It is **NOT** acceptable to apply Armor Shield in the cuff and support/clamp regions.

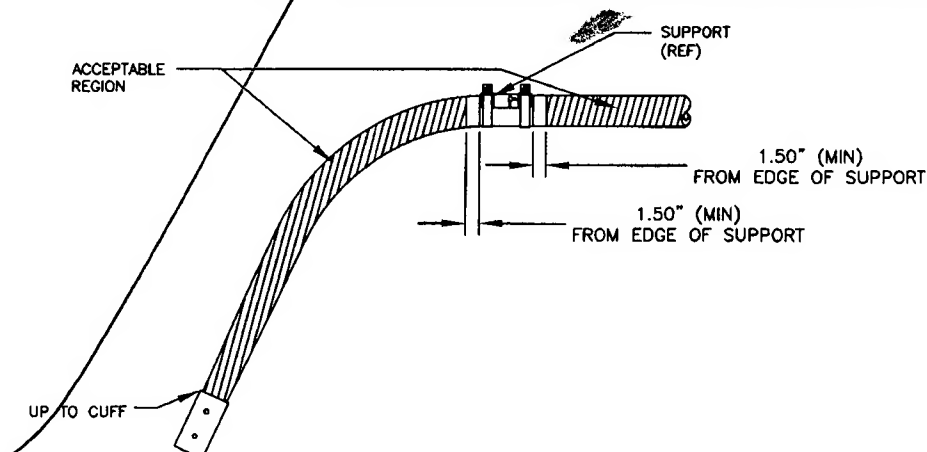
### 1.0 To apply Armor Shield

- 1) Ensure the crosstube is appropriately finished in accordance with the relevant manufacturing drawing or Instruction for Continued Airworthiness (ICA).
- 2) Mask areas around supports and cuffs per Figure 1. Abrade paint finish in areas requiring protection using 320 grit sandpaper.
- 3) Clean/degrease surface of crosstube using Methyl Ethyl Ketone (MEK), 4105S Wash'n'Wipe Degreaser, or equivalent and wipe the surface to clean the entire area.
- 4) Apply 3 coats of Proform PF 746 or PF 746-1 to surface (apply additional coats when surface is dry, but not fully cured).
- 5) Allow 5 hours for coating to dry.
- 6) Apply 2 coats of Imron 500s Polyurethane Enamel clear + Dupont Imron Polyurethane Enamel Activator 192S (mix 3:1). Mix 15 minutes prior to application and allow 15 minutes before applying additional coats.

### 2.0 Armor Shield removal/re-application

To remove the Armor Shield coating or if damage to the coating and/or crosstube is observed during inspection.

- 1) Remove Armor Shield from the affected area using 80 grit sandpaper. To remove Armor Shield from larger areas, bead blasting has been determined to be the most effective technique.
- 2) Repair mechanical damage (within limits) to the crosstube and touch up finish in accordance with the relevant ICA.
- 3) Apply Armor Shield in accordance with Section 1.0 of these instructions.



**FIGURE 1 - ACCEPTABLE REGIONS TO BE COATED WITH ARMOR SHIELD**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER  
NO. 35410

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY: *D. Shepherd*  
D. SHEPHERD (DE # 02)

DATE: 06.02.14  
CERT. NO.: SH03-6/SH01-9/SH01-5  
ISSUE NO.: 3/3/3

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# DART SERVICE INSTRUCTION

To further protect Dart crosstubes from mechanical damage in service, they may be treated with "Armor Shield" surface treatment. To designate crosstubes with 'Armor Shield' add 'A' to the Part Number. For example, D206-667-101A is a D206-667-101 crosstube coated with Armor Shield. The Change Number of Dart crosstubes with "Armor Shield" is affected as per above table. It is acceptable to apply the Armor Shield in regions shown in Figure 1 or Figure 2 only. It is **NOT** acceptable to apply Armor Shield in the cuff and support/clamp regions.

INSTALLATION	STC		CHANGE NUMBER	
	CANADIAN	FAA	DSI 9326 REV. A (Proform PF746/746-1 Treatment)	DSI 9326 REV. B (BCG4 Treatment)
D205-596-101A/-103A/-105/-107A	SH03-6 ISSUE 3	SR01742NY	CHG 001	CHG 002 (or later)
D212-664-101A/-201A D412-664-203A D412-664-105A/-205A	SH01-9 ISSUE 3	SR01298NY	CHG 002 (or earlier) CHG 004 (or earlier) N/A	CHG 003 (or later) CHG 005 (or later) CHG 001 (or later)
D206-667-101A/-103A/-201A/-203A D407-667-105A/-205A	SH01-5 ISSUE 3	SR01304NY	CHG 001 CHG 002 (or earlier)	CHG 002 (or later) CHG 003 (or later)
D058-676-101A/-201A	N/A	SR01018SE	CHG 001	CHG 002 (or later)
D350-748-101A/-201A	SH06-27 ISSUE 1	SR02359NY	N/A	CHG 001 (or later)

## 1.0 TO APPLY ARMOR SHIELD

- 1.1 Ensure the crosstube is appropriately finished in accordance with the relevant manufacturing drawing or Instruction for Continued Airworthiness (ICA).
- 1.2 Clean/degrease surface of crosstube using Methyl Ethyl Ketone (MEK), 4105S Wash'n'Wipe Degreaser, or equivalent and wipe the surface to clean the entire area
- 1.3 Mask areas around supports and cuffs per Figure 1 or Figure 2 (D350-748-101/-201 only). Abrade paint finish in areas requiring protection using 800 grit sandpaper. Ensure the surface is de-glossed.
- 1.4 Re-clean the surface per Step 1.2.
- 1.5 Mix BCG4 Component A and BCG4 Component B in accordance with manufacturer's instructions.
- 1.6 Apply 5 wet coats in accordance with manufacturer's instructions.
- 1.7 To avoid hard tape line, unmask immediately after application of last coat.
- 1.8 Allow BCG4 to dry in accordance with manufacturer's instructions.

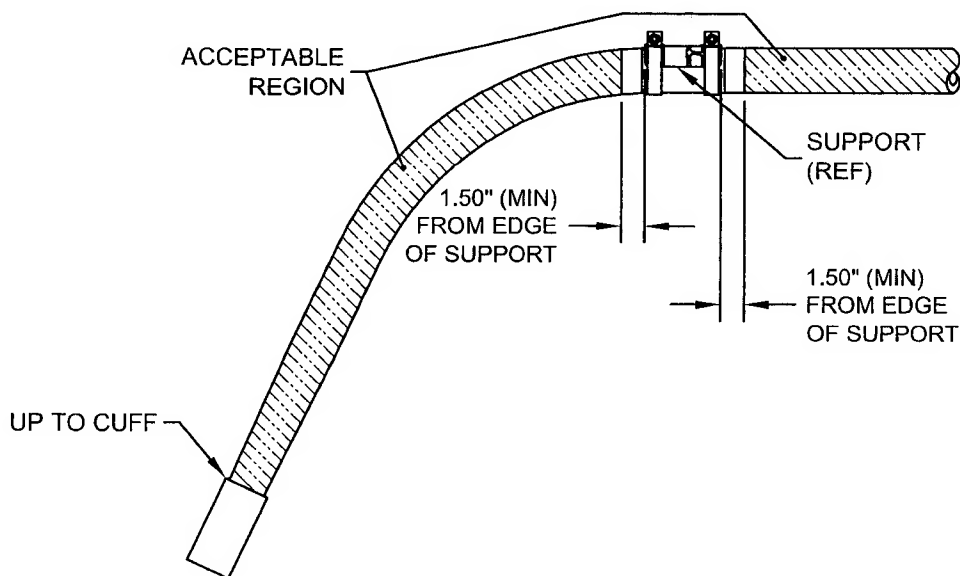
## 2.0 ARMOR SHIELD REMOVAL / RE-APPLICATION

To remove the Armor Shield coating or if damage to the coating and/or crosstube is observed during inspection.

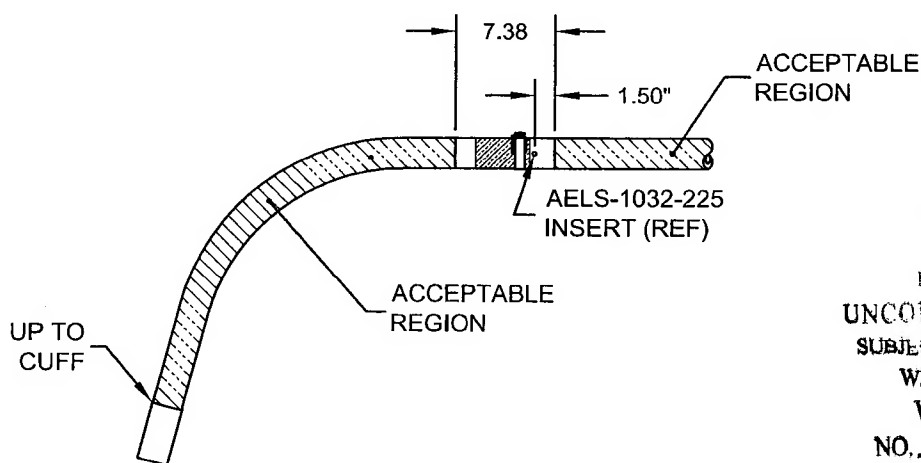
- 2.1 Remove Armor Shield from the affected area using 80 grit sandpaper. To remove Armor Shield from larger areas, bead blasting has been determined to be the most effective technique.
- 2.2 Repair mechanical damage (within limits) to the crosstube and touch up finish in accordance with the relevant ICA.
- 2.3 Apply Armor Shield in accordance with Section 1.0 of these instructions.

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01
<b>APPROVED</b> BY: <u>D. SHEPHERD (DE # 02)</u>
DATE: <u>07.10.17</u> CERT. NO.: <u>SEE TABLE</u> ISSUE NO.: <u>SEE TABLE</u>

B	BCG4 REPLACES DISCONTINUED PROFORM PF 746-1; ADD D350-748-101/-201	NO. <u>35320</u>	MB	07.10.17
A	NEW ISSUE		PH	06.02.14
REV.	DESCRIPTION		BY	DATE
DESIGN	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA		REV. B SHEET 1 OF 2 SCALE NTS	
DRAWN				
CHECKED				
MFG. APPR.				
APPROVED				
DE APPR.	TITLE		ARMOR SHIELD	
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**FIGURE 1 - ACCEPTABLE REGIONS TO BE COATED WITH ARMOR SHIELD**  
**(SEE FIGURE 2 FOR D350-748-101/-201 CROSSTUBES)**



**FIGURE 2 - ACCEPTABLE REGIONS TO BE COATED WITH ARMOR SHIELD**  
**(D350-748-101/-201 ONLY)**

CANADA  
 DEPARTMENT OF TRANSPORT  
 AIRCRAFT CERTIFICATION  
 BRANCH  
 DAO # 01-O-01

**APPROVED**

BY: *[Signature]*  
 D. SHEPHERD (DE # 02)

DATE: 07.10.17  
 CERT. NO.: SEE TABLE  
 ISSUE NO.: SEE TABLE

DESIGN	<i>PH</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>PH</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	DSI 9326	SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ARMOR SHIELD	NTS
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